

REMARKS:

Status of the Claims

Currently, claims 22-37 and 39-48 are pending in the application. Claims 22, 42, 43 and 47 are independent claims. Claim 22, along with dependent claims 23-37, constitutes a first claim set. Claim 42, along with dependent claims 39-41, constitutes a second claim set. Claim 43, along with dependent claims 44-46, constitutes a third claim set. Claim 47, along with dependent claim 48, constitutes a fourth claim set.

Claim Objections

Claim 42 is objected to because the claim contains an informality. Applicants have amended claim 42 to correct the informality.

Claim Rejections – 35 U.S.C. 102

Claims 43-44

Claims 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Kauser et al. For the reasons set forth below, Applicants respectfully submit that these claims are not anticipated by Kauser. Thus, reconsideration of the rejection under 35 U.S.C. 102 is respectfully requested.

Kauser discloses a method for determining the location of a wireless telephone by analyzing the strengths of signals from nearby base stations. It is often desirable to determine the specific geographic location of a mobile telephone 120 within the geographic serving area 100. (col. 5, lines 23-26). For each call handled by the MSC 220, the MSC 220 is configured to perform an A/B number analysis to determine whether a location function is to be performed. (col. 5, lines 37-40). Thus, in Kauser, the MSC 20 determines whether to locate the mobile telephone 120 **when a call is received from the mobile telephone 120**. Examples of such a call are: “the MSC 220 can initiate the location function each time a mobile telephone calls 911,” (col. 5, lines 40-41); “if the user of the mobile telephone 120 dials a certain number, the MSC 220

can initiate the location function.” (col. 5, lines 44-47); and “a company which uses a fleet of vehicles may want a location function performed each time a call is initiated from one of its mobile telephones.”

Kauser fails to disclose or teach the limitations of claim 43. First, Kauser is silent about the limitation of “a query receiver configured to receive an inquiry from a user asking a location of a mobile station.” In Kauser, no one asks about the location of mobile telephone. Every time a call is received from the mobile telephone, the MSC 220 determines whether to perform the location function.

Second, Kauser is silent about “a paging control responsive to the inquiry to cause the mobile station to be paged and receive location information of the mobile station from the mobile station.” In Kauser, the location function may be performed after a call is received from the mobile telephone. Therefore, paging is not involved in the location function.

Third, Kauser is silent about “a transmitter configured to transmit to the user a response which comprises at least a part of the location information.” In Kauser, the location of the mobile telephone is reported to police or a company which wants to know the location of the mobile telephone. Police or a company is not a user as defined in claim 43 (In Kauser, no one asks about the location of mobile telephone).

Claims 39 and 41-42

Claims 39 and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Kojima. In Kojima, when a mobile station which has entered a mobile space 9 receives the identification number of the mobile space 9. The mobile station then transmits a registration request which includes the received identification number of the mobile space. (col. 4, line 63 – col. 5, line 2). The number of the service area in which the mobile station is situated is added to the registration request and sent to a switching control station 7.

The switching control station 7 collates the service area in which the mobile station is present with the service area in which the mobile space 9 is present. If the

areas match, the switching control station 7 determines that the mobile station is in the mobile space 9. (col. 5, lines 3-8). Then, **the switching control station 7 transmits a position registration operation stopping signal to the mobile station.** (col. 5, lines 8-9). After receiving the position registration operation stopping signal, the mobile station will listen only to the position recognition channel 25 of the mobile space 9 and not initiate a position registration with the switching control station 7. (col. 5, lines 13-25).

Kojima fails to disclose or teach the limitation of claim 42 to “a second registration control responsive to the identification signal to disable the first registration control and transmit a second registration request which comprises the identification of the transportation, whereby the mobile station becomes locatable with respect to the transportation.” In the present invention, the second registration control is **responsive to the identification signal from the transportation** and disables the first registration control. On the other hand, in Kojima, the mobile station is responsive to the position registration stopping signal from the switching control station 7 and disables the position registration function.

Since the above limitation of claim 42 is missing in Kojima, Kojima cannot anticipate claim 42. Since claim 42 is not anticipated, its dependent claims, claims 39-41, are also not anticipated.

Claim Rejections – 35 U.S.C. 103

Claims 22-30, 37

Claims 22-30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Tuohino, U.S. Patent No. 5,577,264. For the reasons stated below, Applicants respectfully submit that the inventions recited in claims 22-30 and 37 are patentable over the cited references.

Kojima fails to disclose the limitation of claim 22 to “a transportation location finder configured to identify a communication area where the transportation is situated,

based on movement information obtained from a traffic control that manages an operation of a transportation system including the transportation on which the mobile station is carried.” In the present invention, the communication area where the transportation is situated is identified based on movement information. **The movement information is obtained from a traffic control which manages an operation of a transportation system.**

The Examiner found in the Office Action that the switching control station 7 (of Kojima) has a function of updating, when the mobile space moves in the real space and performs a position registration operation, also the position information of the mobile station from the identification number of the mobile space, in which mobile station is present, is acquired through the base station.” (See page 7 of the Office Action). It seems that the Examiner is trying to relate (i) the switching control station 7 to the transportation location finder recited in claim 22 and (ii) the location registration request from the mobile space to the movement information recited in claim 22.

These are wrong analogies. The location registration request cannot be the movement information. In the present invention, the movement information comes from a traffic control which manages an operation of a transportation system, not from the transportation itself or the mobile station. In the present invention, a traffic control which manages an operation of a transportation system is, for instance, a railway company operating trains as discussed in the specification. The railway company knows the movements of its trains according to the train schedules. The railway company also knows any delays in train schedules. The example of the movement information discussed in the specification is a longitude and latitude information on the location of a train. Thus, the movement information from the traffic control can help accurately identify the locations of the transportations. Kojima is silent about the traffic control which manages an operation of a transportation system.

Tuohino also fails to disclose or teach the transportation location finder. Tuohino discloses a mobile subsystem (MCPN) registrable with a fixed cellular radio network.

The subsystem may be disposed in a vehicle such as a train, ship, car or airplane. (col. 4, lines 45-46). The fixed cellular radio network maintains the location data of the MCPN. (col. 5, lines 6-8). The MCPN broadcasts a unique location area identifier. When a MS moves to a MCPN, the MS effects location updating to the MCPN. The MCPN, in turn, transmits the information on the location of the MS to the fixed cellular radio network, which stores the corresponding logical location area, i.e., identification data of the MCPN, as the location data of the MS. (col. 5, lines 10-16). Tuohino is silent about the traffic control which manages an operation of a transportation system.

Nor does Kauser or Jones disclose or teach the invention recited in claim 22. As discussed above, Kauser discloses a method for determining the location of a wireless telephone by analyzing the strengths of signals from nearby base stations. There is nothing in Kauser that discloses or teaches the invention recited in claim 22.

Jones discloses a vehicle tracking system. A vehicle 17 comprises a vehicle control unit (VCU) 15 and a GPS sensor. (See Fig. 1). The VCU 15 comprises a vehicle manager 29. (See Fig. 2). The VCU 15 also comprises a predefined vehicle schedule 39a. (See Fig. 3). The predefined vehicle schedule includes data defining locations along the vehicle's intended route of travel, and each location is associated with a particular time value indicating when the vehicle 17 is expected to reach the associated location. (col. 6, lines 35-46). As the vehicle 17 travels along the predetermined route of travel, the vehicle manager 29 compares the current locations of the vehicle with the location values defined in the vehicle schedule 39a in order to determine whether the vehicle 17 is off schedule or on schedule. (col. 7, lines 17-27 and lines 34-37). Then, the vehicle manager 17 transmits a status message to a user of the vehicle via a cellular network 48 (Fig. 1). If the vehicle is off schedule, the status message indicates that the vehicle 17 is off schedule and indicates the amount of time that the vehicle 17 is off schedule. (col. 8, lines 17-24).

In Jones, location management is performed by the vehicle manager 29 which is on the vehicle, along with a communications device 44. First of all, Jones is silent about the mobile station as defined in claim 22. The vehicle manager 29

communicates with the user via the cellular network 48, but the user cannot be a mobile station because it is connected to a PSTN network. (See Fig. 1). The communication device 44 on the vehicle cannot be the mobile station as defined in claim 22 because the vehicle manager 29 does not communicate with the communication device 44, using the mobile communication network. Also, the vehicle manager 29 never receives, from either the user or the communication device 44, an identification of a transportation on which the mobile station is carried. Thus, Jones fails to disclose or teach the communication control recited in claim 22. Likewise, Jones fails to disclose or teach the location information storage recited in claim 22 because Jones is silent about the mobile station.

The status message of Jones cannot be the movement information of the present invention. In Jones, the status message comes from a vehicle, whereas in the present invention, the movement information comes from a traffic control that manages an operation of a transportation system. Jones is silent about the traffic control. Thus, Jones fails to disclose or teach the transportation location finder. Also, Jones fails to disclose or teach the paging control recited in claim 22 because neither the user nor the communication device 44 receives a paging signal.

For the reasons set forth above, claim 22 should be allowable because the cited references, either alone or in combination, do not disclose or teach the invention recited in claim 22. Since claim 22 should be allowable, its dependent claims, claims 23-37, should also be allowable over the cited references.

Claims 31-36

Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima and Tuohino, further in view of Jones. As discussed above, none of the references, either alone or in combination, discloses or teaches the inventions recited in claims 31-36. Therefore, claims 31-36 should be allowable over the cited references.

Claim 40

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Jones. As discussed above, Kojima fails to disclose or teach the limitation of claim 42 to “a second registration control responsive to the identification signal to disable the first registration control and transmit a second registration request which comprises the identification of the transportation, whereby the mobile station becomes locatable with respect to the transportation.” Jones too fails to disclose or teach the limitation. Therefore, claim 42 should be allowable over Kojima and Jones because Kojima and Jones, either alone or in combination, fail to disclose or teach the limitation of claim 42. Since claim 42 should be allowable, claim 40, a dependent claim of claim 42, should also be allowable over the references.

Claims 45 and 47-48

Claims 45 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kauser in view of Kojima and Jones. As discussed above, Kauser neither discloses nor teaches any of the limitations of claim 43. Also, these missing limitations are neither disclosed nor taught by either Kojima or Jones. Therefore, claim 43 should be allowable over Kauser, Kojima and Jones because these reference, either alone or in combination, fail to disclose or teach the invention recited in claim 43. Since claim 43 should be allowable, claim 45, a dependent claim of claim 43, should also be allowable over the references.

Claims 47 and 48 should also be allowable over Kauser, Kojima and Jones. First, Kauser is silent about the limitation of claim 47 to “a query receiver configured to receive an inquiry from a user asking a location of a mobile station.” In Kauser, no one asks about the location of mobile telephone. Every time a call is received from the mobile telephone, the MSC 220 determines whether to perform the location function.

Kauser fails to disclose or teach the limitation of “a memory that stores time schedules of transportations” because Kauser is silent about schedules of transportations.

Kauser fails to disclose or teach the limitation of “a location queryer responsive to the inquiry to find if the mobile station is situated on a transportation” because, as explained above, Kauser is silent about the inquiry.

Kauser also fails to disclose or teach the limitation of “a location estimator configured to determine, if the mobile station is situated on a transportation, a future location of the mobile station by referring to the time schedules stored in the memory.” Kauser determines the current location of a mobile station, not a future location of the mobile station.

Lastly, Kauser fails to disclose or teach the limitation of “a transmitter configured to transmit to the user a response which comprises the determined future location of the mobile station.” In Kauser, the location of the mobile telephone is reported to police or a company which wants to know the location of a vehicle. Police or a company is not a user as defined in claim 43 (In Kauser, no one asks about the location of mobile telephone).

Likewise, Kojima fails to disclose or teach any of the limitations of claim 47. In Komima, no one asks about the location of mobile telephone. Kojima is silent about the schedules of transportations recited in the claim. Kojima does not determine a future location of the mobile station. Kojima does not report a future location of the mobile station to anyone.

Jones fails to disclose or teach the invention recited in claim 47. Jones is silent about the limitation of “a location queryer responsive to the inquiry to find if the mobile station is situated on a transportation.” In Jones, no one asks about the location of mobile telephone. In Jones, if the vehicle is off schedule, the vehicle manager voluntarily notifies a user of the delay.

Since none of the references, either alone or in combination, discloses or teaches the invention recited in claim 47, claim 47 should be allowable over the references. Since claim 47 should be allowable, claim 48, a dependent claim of claim 47, should also be allowable over the references.

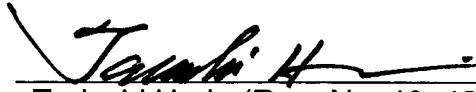
Claim 46

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kauser in view of Kojima. As discussed above, Kauser discloses or teaches none of the limitations of claim 43. Also, these missing limitations are neither disclosed nor taught by Kojima. Therefore, claim 43 should be allowable over Kauser and Kojima because these references, either alone or in combination, fail to disclose or teach the invention recited in claim 43. Since claim 43 should be allowable, claim 46, a dependent claim of claim 43, should also be allowable over the references.

Respectfully submitted,

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Date



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